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U.S. Patent Application No. 09/954,494

Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW

Attorney Docket: 3863.015

REMARKS

Review and reconsideration of the Office Action of December 22, 2003, is respectfully requested in view of the above amendment and the following remarks.

Claim 16 was amended to include the limitation of 67-80% of volatile solvent. Support for the claim amendment can be found in example 1 of the specification of the present application as originally filed.

New Claim 17 has been added. Support for new Claim 17 can be found in Claims 1 and 9 as originally filed and Claim 16. Applicant respectfully requests the Examiner to enter new Claim 17.

Applicant is submitting herewith a Third Declaration under 37 C.F.R. §1.132 to demonstrate that:

- 1) the limitations evaporation cannot be considered an inherent feature of the composition disclosed by Inagi et al; and
- 2) the composition according to the present invention has a better onset than the compositions of Inagi.

Applicant respectfully requests that the Examiner consider the attached Declaration.

Applicant would like to point out to the Examiner that the claims are directed to method claims, thus all the steps of the Claims of the present invention must be taught in order to teach the present invention.

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

Applicant is submitting herewith a Declaration Under 37 C.F.R. §1.132, including comparative examples between the composition of the present invention and compositions 2, 10, 11, and 16 of the Inagi reference in order to demonstrate the unexpected improvement in evaporation of the composition of the present invention.

As can be seen from the results of the test, the formulation of the present invention shows a remarkable evaporation rate over the compositions of the Inagi et al. reference. This remarkable evaporation rate allows the kinetic of the formulation to change so that as the proportion of the remaining alcohol is reduced, a more concentrated anesthetic formulation remains present on the skin, which brings a more advanced level of anesthetization. Thus, the delivery rate of the anesthetic is markedly enhanced.

In addition, because the onset of the anesthetic is reduced, the waiting time from the patient is also reduced, thus the patient has a more tolerant attitude.

As a side benefit, the evaporation of the alcohol cools the skin causing the patient to feel a soothing cool, numbing feeling, which psychologically prepares the patient to the effect of the anesthetic.

In the Inagi et al. reference, the acceptable delivery rate of the medicament that needs to be delivered through the skin is lowered because the low evaporation rate of the composition; thus, the anesthetic will take a longer time to act. Furthermore, because of the low evaporation rate, it is possible

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

that alcohol can interact with the patient's skin and cause irritation. As can be seen, the Inagi et al reference does not overcome the problem of the prior art.

Applicant notes that the reference fails to teach that the volatile solvent in an amount between 67-80% as required by new Claim 16.

Office Action

Turning now to the Office Action in greater detail, the paragraphing of the Examiner is adopted.

Paragraphs 3 & 4 (Response to Amendment)

The Examiner indicated that the Declaration under 37 CFR 1.132 filed July 9, 2003 is insufficient to overcome the rejection of Claims 1-15 based upon 102 rejection, anticipated by Inagi et al. (US 6,429,228).

The position of the Examiner can be found on pages 2-3 of the Office Action.

Applicant is submitting herewith a Third Declaration under 37 C.F.R. §1.132 to demonstrate that:

- 1) the limitations evaporation cannot be considered an inherent feature of the composition disclosed by Inagi et al; and
- 3) the composition according to the present invention has a better onset than the compositions of Inagi.

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

Applicant respectfully requests that the Examiner consider the attached Declaration.

Furthermore, Applicant would like to point out to the Examiner reasons why a composition having high evaporation rate has unexpected improvement of anesthetic effect over a composition having low evaporation rate.

The composition of the present invention does not use water, thus the evaporation rate of the volatile solvent is higher than the evaporation rate of a composition that utilizes water. This remarkable evaporation rate allows the kinetic of the formulation to change so that as the proportion of the remaining alcohol is reduced, a more concentrated anesthetic formulation remains present on the skin, which brings a more advanced level of anesthetization. Thus, the delivery rate of the anesthetic is markedly enhanced.

In the Inagi et al. reference, the acceptable delivery rate of the medicament that needs to be delivered through the skin is lowered because of the low evaporation rate of the composition; thus, the anesthetic will take at least 30 minutes (longer time to act.) (column 7, lines 29-34)

This delay in onset is a significant disadvantage, as it is a great inconvenience for both patients and medical staff. Such delay is particularly a problem in the area of pediatrics, where any additional time spent awaiting treatment only contributes to the anxiety of the patient.

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

As a side benefit, the evaporation of the alcohol cools the skin, causing the patient to feel a soothing cool, numbing feeling, which psychologically prepares the patient to the effect of the anesthetic.

In addition, the prolonged contact of the alcohol with the skin can cause skin irritation. As can be seen, the Inagi et al reference does not overcome the problem of the prior art.

Furthermore, after much of the alcohol has evaporated, the kinetics of the formulation change so that, as the proportion of remaining alcohol is reduced, a more concentrated anesthetic formulation remains present on the skin, which brings about a more advanced level of anesthetization.

Thus, by using the formulation of the present invention, the delivery rate of the anesthetic is markedly enhanced, the method of administration remains simple, the incidence of side effects associated with many penetration enhancers is reduced or eliminated, topical irritation is avoided, and the comfort level of the patient is increased as the patient has the perception that the formulation is taking effect.

Paragraphs 1 - 2 (Formalities)

The Examiner rejects Claim 16 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The position of the Examiner can be found on pages 3-4 of the Office Action.

In response, Applicant has amended Claim 16 to overcome the

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

formality rejection.

Support for the claim amendment can be found in example 1 of the specification of the present application, which teaches 600 g of composition containing 490 ml of isopropyl alcohol.

The density of the isopropyl alcohol is 0.823g/cc; thus, the mass of the isopropyl alcohol in the composition is 403.27 g, which represents 67% of the weight of the composition.

Thus, there is support in the specification for this limitation.

Furthermore, Applicant would like to point out to the Examiner that In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), the ranges described in the original specification included a range of "25%- 60%" and specific examples of "36%" and "50%." A corresponding new claim limitation to "at least 35%" did not meet the description requirement because the phrase "at least" had no upper limit and caused the claim to read literally on embodiments outside the "25% to 60%" range, however, a limitation to "between 35% and 60%" did meet the description requirement.

In the present case, the original specification discloses a range of "40%-80%" and specific example of "67%". A corresponding new claim limitation between 67-80% will meet the description requirement.

Thus, the example conveys to one of ordinary skill in the art that the inventor had possession of the later claimed subject matter (i.e. 67-80%) at the time the application was filed because the claimed invention (i.e. 67-80%) has written

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

descriptive support in Example of the application disclosure as originally filed.

Accordingly, withdrawal of the rejection is respectfully requested.

Paragraphs 3 - 4 (Anticipation)

The Examiner rejects Claims 1-4, 6, and 8-15 under 35 U.S.C. 102(e) as being anticipated by Inagi et al (US 6,429,228).

The position of the Examiner can be found on pages 4-5 of the Office Action.

Applicant respectfully traverses for the same reasons as set forth in the paragraph entitled "Response to Arguments."

Accordingly, withdrawal of the rejection is respectfully requested.

Paragraphs 5 - 6 (obviousness)

The Examiner rejects Claim 16 under 35 U.S.C. 103(a) as being obvious over Mangione et al (US 6,485,714).

The position of the Examiner can be found on pages 5-6 of the Office Action.

Applicant respectfully traversess.

Applicant notes that the '714 patent was issued on November 26, 2002, which is more than one year after the filing date of the present application, September 17, 2001.

U.S. Patent Application No. 09/954,494

Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW

Attorney Docket: 3863.015

Applicant is submitting herewith a Declaration under 1.130. Applicant respectfully requests that the Examiner consider the attached Declaration.

In addition, Applicant notes that nowhere in the reference can be found the teaching of:

- 1) a method for applying topical anesthetic into the skin;
- 2) forming a homogeneous solution by incorporating (dissolving) into a volatile solvent an anesthetic in a lipophilic base, the lipophilic base selected from the group consisting of White Ointment USP, Yellow Ointment NF, Oleic Acid USP, Olive Oil USP, Paraffin USP, Petrolatum NF, White Petrolatum USP, Spermaceti Wax USP, Synthetic Spermaceti NF, Starch Glycerite NF, White Wax USP, and Yellow Wax USP; and
- 3) evaporating the volatile solvent from the homogeneous solution.

Regarding point 1

The reference is directed to the treatment of hyperpigmentation of the skin, which is a different field from the field of the present invention: anesthetic.

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

Regarding point 2

Nowhere in the reference can be found the teaching of adding an anesthetic in a lipophilic base into a solvent.

The reference teaches a composition having salicylic acid as an active agent, a surfactant, and a carrier. The composition further comprises an anesthetic (optional element).

Applicant notes that the reference uses as a penetration enhancer cationic polymers such as polyacrylamide and isoparaffin and not alcohol as the present invention.

In addition, Applicant notes that the salicylic acid (active agent) is dissolved in the organic solvent (column 3, lines 60-65). The reference also indicated that petrolatum may be used as skin protector. Nowhere in the reference can be found the teaching that the anesthetic is dissolved in a lipophilic base.

In addition, Applicant notes that all the preferred embodiments of Mangione et al. involve oil-in-water emulsions wherein the salicylic acid is dispersed in a polar organic solvent in which it is not soluble. In the present invention, in contrast, a eutectic mixture of anesthetics (oils) is taught, which is completely miscible in the lipophilic base.

An advantage, as well as a major distinguishing feature, of the formulation of the present invention is attributable to the utilization of a lipophilic base rather than an aqueous vehicle or an oil-in-water emulsion (the term "water", when referring to oil-in-water emulsions, includes hydrophilic liquids which serve as water substitutes).

U.S. Patent Application No. 09/954,494
Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW
Attorney Docket: 3863.015

In addition, Applicant notes that the Mangione reference requires 30% to 80% of water (Claim 12) in his formulation. The present invention requires a lipophilic base.

According to the Webster Dictionary, "Lipophilic" is defined as having an affinity for, tending to combine with, or capable of, dissolving in lipids (oil, fat).

In the present invention, page 12 of the specification, is an indication that the lipophilic base must be hydrophobic. According to the Webster Dictionary, "hydrophobic" means having an aversion to water.

Thus, there is no technical motivation to combine a water-based composition with a composition that requires a hydrophobic base.

In addition, we note that the Examiner recognizes that Mangione did not teach a composition comprising all the ingredients of Claim 16, but suggests that the combination of all the ingredients of his patent enhances the efficacy of the composition which is directed to hyperpigmentation of the skin.

It looks like the Examiner is using the claim as a roadmap to pick and choose the elements from the reference to create the composition of Claim 16 in the present invention.

It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art."

U.S. Patent Application No. 09/954,494

Amendment E AND REQUEST FOR A TELEPHONE INTERVIEW

Attorney Docket: 3863.015

The motivation to modify the prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. Evidence of such motivation may "flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved."

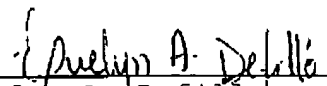
Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. A composition that is efficiency in treating hyperpigmentation of the skin does not have to be efficient as anesthetic.

Accordingly, withdrawal of the rejection is respectfully requested.

Favorable consideration and early issuance of the Notice of Allowance are respectfully requested. The Examiner is respectfully requested to contact the undersigned at the indicated telephone number to arrange a telephone interview.

Respectfully submitted,

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